



Mmogo re Isago

The Botswana National Supply Chain Strategy 2014-2019



May 20, 2014



Providing quality medicines for people
living with and affected by HIV and AIDS



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Ministry of Health
Plot 54609
24 Amos Street
Government Enclave
Gaborone

Dumela:

On behalf of His Excellency the President, Lt. General Seretse Khama, and Hon. Dr., Rev. John Seakgosing, Minister of Health, we present The Botswana National Health Supply Chain Strategy - our plan for ensuring access to supplies of medicines and other health commodities for all Batswana.

Consistent with our mandate to promote and provide comprehensive preventative, curative and rehabilitative quality health care services to the nation, the Ministry of Health is committed to several strategic goals. These goals range from improving access and quality of services to reducing the incidence of disease. Supporting our ability to meet these goals is a supply chain. The health supply chain is a network of people, activities such as buying, shipping, and quality testing, and assets such as buildings, software and trucks.

It's easy to understand why healthy clients need healthy supply chains. What many people do not understand is that healthy supply chains need planning and coordination. That's why we can truly say "Mmogo re Isago" when we think about our supply chain. Because working together is the only way that the people, the activities, and the assets that make up our supply chain can work effectively.

This Botswana Supply Chain Strategy is the blueprint for working together. With it as a guide, the many stakeholders who build, support, manage and operate our supply chain can coordinate their efforts and thus provide our citizens with the vital, essential, and life-saving health commodities they need.

Dr. Kolaatamo Malefho
Permanent Secretary
Ministry of Health

About SCMS

The Supply Chain Management System (SCMS) was established to enable the unprecedented scale-up of HIV/AIDS prevention, care and treatment programs in the developing world. SCMS procures and distributes essential medicines and health supplies, works to strengthen existing supply chains in the field, and facilitates collaboration and the exchange of information among key donors and other service providers. SCMS is an international team of 13 organizations funded by the US President's Emergency Plan for AIDS Relief (PEPFAR). The project is managed by the US Agency for International Development.

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Acronyms

Acronym	Full Title or Reference
ART	Anti-Retroviral Therapy
ARV	Antiretroviral drug
BEDAP	Botswana Essential Drugs Action Program
BSC	Balanced Scorecard
CDC	The United States Centers for Disease Control and Prevention
CMS	Central Medical Stores
DHMT	District Health Management Team
CHAI	Clinton Health Access Initiative
DCS	Department of Clinical Services
DPS	Deputy Permanent Secretary
DRU	Drug Regulatory Unit
FDA	United States Food and Drug Administration
GoB	Government of Botswana
GFATM	The Global Fund to Fight AIDS, Tuberculosis and Malaria
HPDME	Department of Health Policy Development, Monitoring and Evaluation
IHS	Botswana Institute of Health Sciences
ISO	International Standards Organization
IT	Information Technology
LMU	Logistics Management Unit
MDGs	Millennium Development Goals
M&E	Monitoring and Evaluation
NDQCL	National Drug Quality Control Laboratory
MFDP	Ministry of Finance and Development Planning
MoH	Ministry of Health
NHL	National Health Laboratory
NTRL	National TB Reference Laboratory
PS	Permanent Secretary of the MoH

PDP	Personal Development Plan
PEPFAR	The United States President's Emergency Plan for AIDS Relief
PPADB	Public Procurement and Asset Disposal Board
SDP	Service Delivery Point
SOP	Standard Operating Procedure
SWOT	Strengths, Weaknesses, Opportunities, Threats
UNFPA	The United Nations Family Planning Agency
UB	University of Botswana
USAID	The United States Agency for International Development

Introduction

An effective and efficient public health supply chain system can be hard to achieve and even harder to sustain. The list of countries that have struggled to make quality medicines universally available to their citizens is a long one.

What many policy-makers, funders, health care workers, and even clients in many countries do not fully appreciate is that what distinguishes countries with effective and efficient public health supply systems from those that fall short of expectation is alignment: alignment of medicines policies with epidemiology; alignment of procurement with patient demand; alignment of warehousing specifications with product storage requirements. In fact, there are hundreds of alignments in an effective supply chain system and thus hundreds of instances where coordination among entities and people must occur.

In Botswana, the MoH understands this. They also understand that an efficient and effective health supply system leads to healthy people, a healthy workforce and prosperity for all.¹ This is why they have worked so tirelessly over the past decade to improve their supply chain system. It is also why they convened a supply chain strategy workshop in March of 2014. It was and is the hope of the MoH that a thoughtful supply chain strategy can provide a blueprint for coordination and thus a roadmap for making better quality health commodities available to every patient where and when needed.

This document is the output of this health supply chain strategy workshop. Upon final review and acceptance by stakeholders and by the Minister of Health, it becomes the official health supply chain strategy for the country. The document is divided into three sections. The first section provides important contextual information. It explains the various functional areas and supporting systems that contribute to supply chain effectiveness and efficiency. It also provides an assessment of the current state of the health supply chain in Botswana including progress made and challenges that remain. The second section is the core of the strategy. In it, each of the functional areas and supporting systems of the Botswana health supply chain system are addressed in terms of challenges, strategies or interventions to address these challenges, stakeholder responsibilities, performance indicators, timelines, risks and mitigation strategies. The final section provides a summary of next steps.

It should be noted that much like any effective supply chain, this work product is the result of collaboration among many disparate stakeholders sharing a common interest in the health and well-being of people. The authors wish to thank the Minister of Health and the many dedicated professionals within the Government of Botswana who have welcomed this partnership with SCMS in the development of this strategy. We also wish to thank the US government, specifically, its USAID representatives in Botswana for their leadership, their guidance, and their support for the shared investment of supply chain strengthening in Botswana.

SCMS

¹ "Toward Prosperity for All" is the tag line of Botswana's national strategy, *Vision 2016*

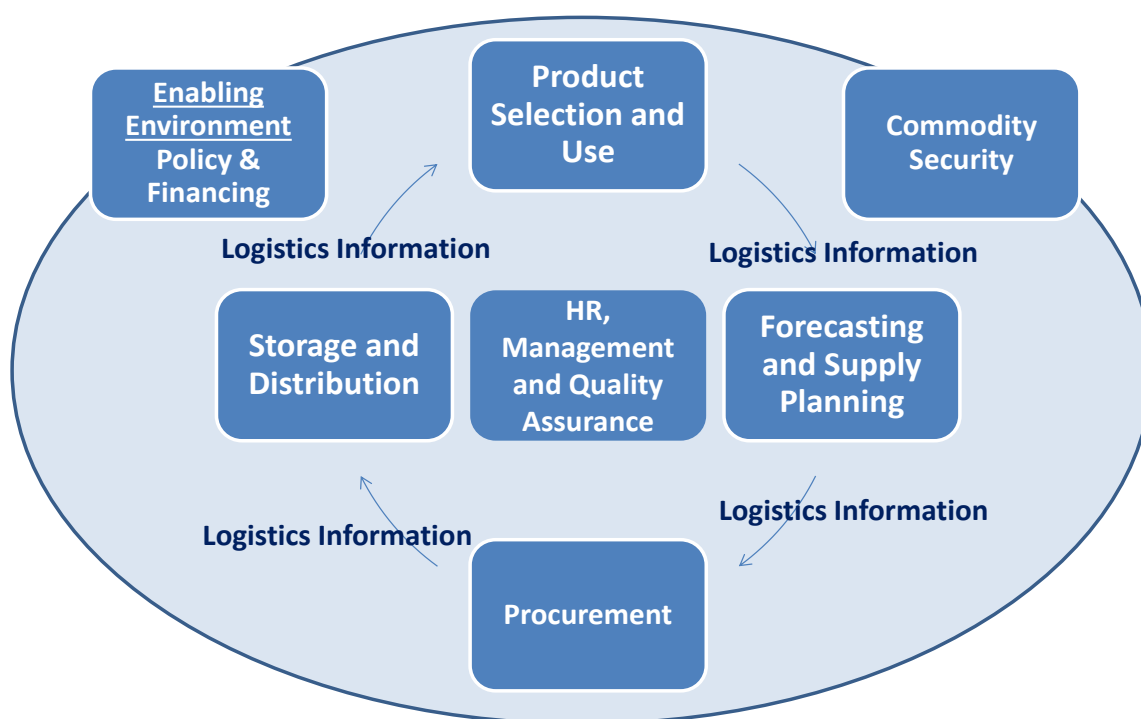
Executive Summary

The government of Botswana's commitment to invest in the health of its people is evidenced throughout the country's existence beginning with independence in 1966. In 2011, the National Health Policy was most recently revised to reflect changes in the national disease burden and to better address emergent socio-economic determinants of Health in Botswana. The National Health Policy sets forth a vision, mission, and guiding principles for the Botswana Health Sector that aligns to the national strategy for long term growth and prosperity reflected in *Vision 2016*.

The Ministry of Health understands that effective and efficient supply chain systems are a precondition for meeting its mandate to provide quality preventative, curative and rehabilitative care to clients in government health facilities. For any supply chain system to function effectively and efficiently, each of the functions of the supply chain must be aligned. For this reason, collaboration among the stakeholders responsible for supply chain activities is a necessary aspect of the system.

The Ministry of Health has worked tirelessly and in close collaboration with development partners, including the USAID/SCMS Project, to improve supply chain planning, operations and coordination. In March of 2014, MOH convened a three day workshop for the purposes of developing a 5-year Botswana Supply Chain Strategy. The workshop was joined by representatives of key stakeholders from across the national health system. Together, participants agreed upon a set of workshop objective and a supply chain conceptual framework that they would use to guide their planning.

Botswana Health Commodity Supply Chain Framework



Using this framework, stakeholders developed strategies and interventions to address challenges in each of the areas defined in the framework. For each of these strategies or interventions, participants also agreed to assignments of responsibility, performance indicators and completion dates as well as strategies for mitigating risk. Below is a summary of the high level strategic interventions identified following this SWOT analysis,

- MOH should immediately strengthen systems to promote evidence based product selection and accountable rational use.
- MOH programs led forecasting and supply planning mechanisms should be used to inform a flexible, transparent and responsive health commodities procurement function which will ensure prudent and optimal use of limited financial resources.
- Sustainable availability of health commodities at SDPs and hence clients' access to health services can also be strengthened if warehousing and distribution systems are capacitated to handle required volumes of products in a timely, secure and quality controlled manner.
- MOH should enhance access to safe and efficacious health commodities of acceptable quality by strengthening health commodities regulatory systems in-country.
- The MOH should improve supply chain decision making at all levels by developing a robust, standardized and integrated Logistics Management Information System
- It is advisable for the MOH to obtain technical assistance from relevant partners to train staff at all levels in health commodities logistics management, clearly define and align roles and responsibilities in supply chain management with human resource management performance management.

Further to the development of these interventions, the workshop also set the way forward to facilitate the implementation of the strategy.

1. Include operationalization of this strategy in the terms of reference for the Commodity Security Forum.
2. Finalize the outsourcing of CMS warehousing and distribution operations.
3. Provide trained staff to manage LMU
4. Revise the logistics management systems in line with outsourced warehousing and distribution contract.
5. Revise Performance Management Plan
6. Develop a detailed and costed implementation plan
7. Develop a risk management strategy

Background

Botswana Facts

Topic	Findings	
Key Statistics²	Land Area	581,730 km ²
	Population	2,004,000
	GDP	\$14.5 billion
Health Administration	Decentralized public health system in which policy-setting occurs at the central level and policy implementation is carried out by DHMTs operating in each of 16 administrative districts. Health expenditures and funding levels are authorized by local councils at the district level.	
Health Work Force³	Doctors	446
	Nurses	4468
	Deployed Pharmacists ⁴ and Pharmacy Technicians	260??
	Laboratory Scientists and Laboratory Technicians	xxx
Public Health Facilities⁵	Referral Hospitals	3
	District Hospitals	12
	Primary Hospitals	17
	Clinics	222
	Health Posts	330
	Total Facilities	584
Health Supply Chain Model	Medicines and other health commodities arrive in country at customs and are then transferred to CMS. Supply orders are generated at the facility level and reviewed and approved by DHMTs. CMS distributes directly to health facilities in most instances, and in some instances, through third party service providers or on a customer pick-up basis.	

Botswana's Vision for Health – A Model of Excellence

The government of Botswana's commitment to invest in the health of its people is evidenced throughout the country's existence beginning with independence in 1966. As early as 1972, a package of basic health care services was established as part of a broader rural development program⁶. In 1992, the National Drug and Related Substances Act first established the mechanisms

² World Bank Country Summary, 2014

³ Africa Health Organization Country Profile, 2008

⁴ Japan Ministry of Health, Labor and Welfare Country Report Botswana, 2009

⁵ Lenmed Health Bokamoso Private Hospital Analysis, June 2012

⁶ Rural Development in Botswana, Government Paper No. 1, March 1972

for ensuring drug quality and in 1996 the first National Health Policy was developed. In 2011, the National Health Policy was revised to reflect changes in the national disease burden and to better address the emergent socio-economic determinants of Health in Botswana.⁷

The National Health Policy sets forth an overall vision, mission, and guiding principles for the Botswana Health Sector that supports and reinforces the broader national strategy for long term growth and prosperity. The National Health Policy further articulates specific policy thrusts and principal areas of action.

Botswana Health Policy At-a-Glance

Strategic Element	Description	
Vision	Model of excellence in quality health services	
Mission Statement	A sustainable improvement in health status through progressive creation and maintenance of physical, mental, economic and social well-being	
Guiding Principles/Values	Guiding Principle	Description
	Ethics	Respect for human dignity, rights, confidentiality and cultural beliefs
	Norms and Standards	Good management practices and quality assurance in service delivery
	Equity	Equitable distribution of resources to guarantee accessibility to quality services at every point of demand, especially for the vulnerable, marginalized and underserved, irrespective of political, ethnic or religious affiliations and place of domicile
	Ownership	Involvement/participation of all stakeholders (providers and users) of health services in defining policy as well as the implementation framework
	Evidence-based	The policy will be based on evidence particularly pertaining to Botswana
	Innovation	Continuous exploration of new ideas in health care delivery, e.g. geographical targeting to benefit high priority areas; health insurance coverage for the disadvantaged sections of society; public private partnership; demand side financing; etc.
	Gender Equity	Addressing gender sensitive and responsive issues, including the equal involvement of men and women in decision-making, eliminating obstacles (barriers) to service utilization, and the prevention of gender-based violence
	Client Satisfaction	Ensuring efficient twenty-four hour quality health services that is more responsive and sensitive to customer needs
	Skilled Staff Retention and Circulation	Attractive service conditions (package and job satisfaction to encourage a net inflow of critically required skills

⁷ National Health Policy, "Towards a Healthier Botswana", December 2011

	Partnerships	Increasing community empowerment; active involvement of the private sector, NGOs, local government authorities and civil society, and effective development partner co-ordination
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The National Health Policy is also supported by numerous other important technical reports and evidence-based policies, acts and guidance documents. Together, these documents provide a comprehensive national health strategic framework.

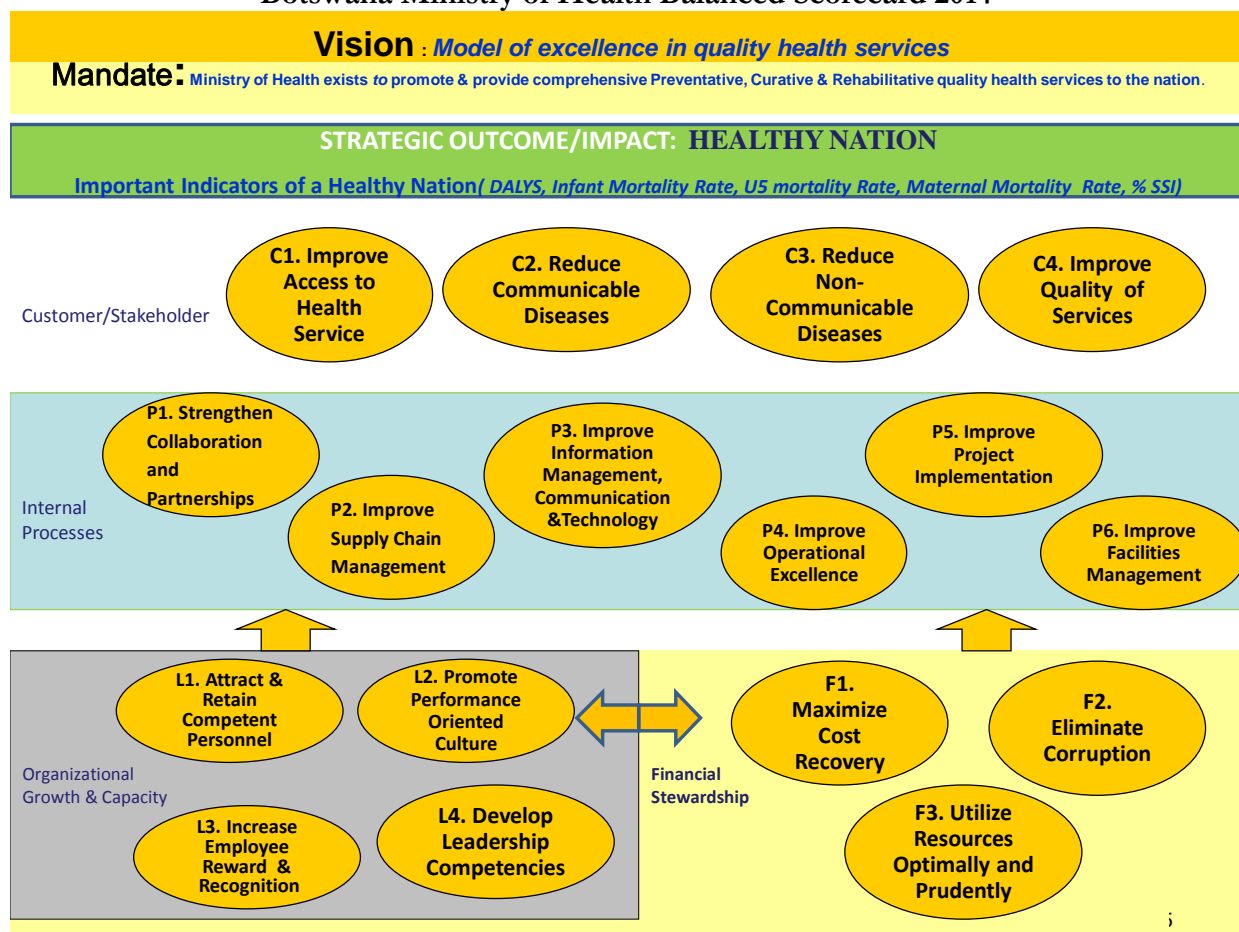
Ministry of Health Policies and Acts



Underlying this strategic framework is the Balanced Scorecard (BSC). BSC is a strategic planning and management approach introduced by Harvard Business School's Robert Kaplan and David Norton in the early 1990's. Today, the system is used by organizations around the world to ensure that activities undertaken by managers and employees are aligned to strategy. Using the BSC approach, an organization defines their strategies from four perspectives: 1) financial; 2) customers; 3) internal or operational; and 4) learning and growth. These perspectives are then further defined in terms of supporting objectives, measures and targets that can be monitored for completion. By using BSC as a strategic planning tool and as an operational guide, the organization can drive strategic goals through to the daily activities of staff at all levels of the organization.

In Botswana, the government has instituted a National BSC system whereby all ministries have developed or are in the process of developing their own BSCs. Ministry BSCs are specific to individual ministry mandates but support and reinforce Vision 2016 and the National BSC.

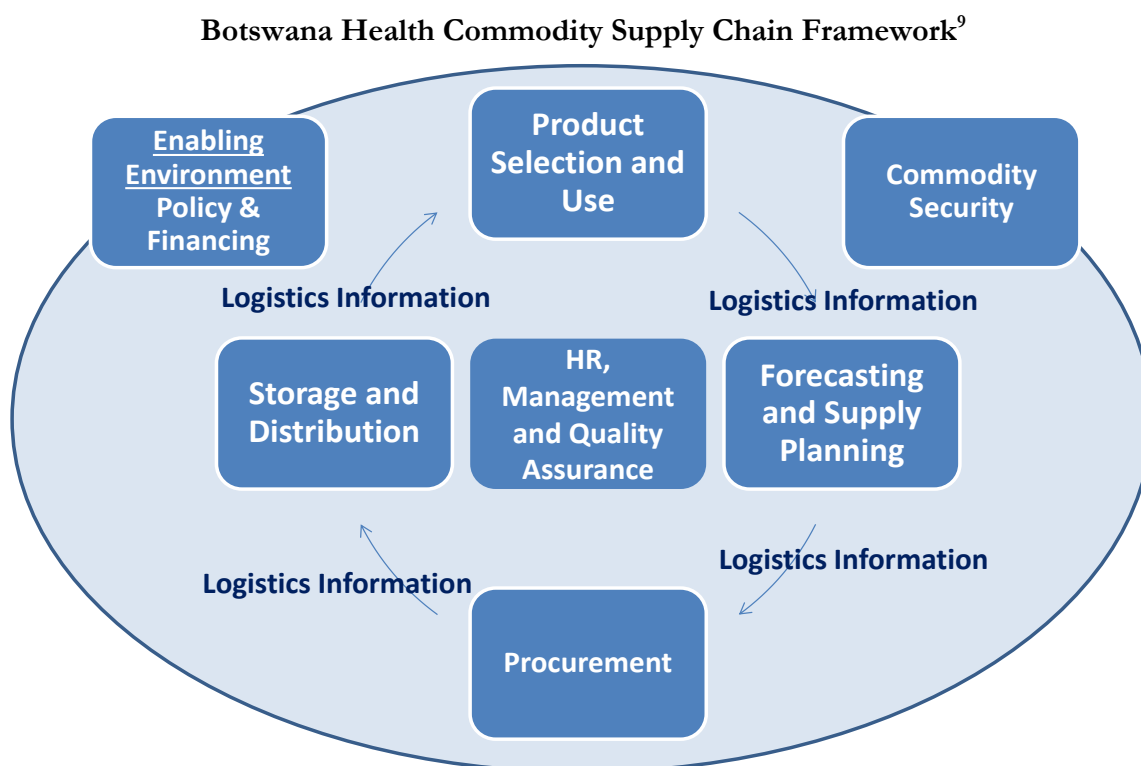
Botswana Ministry of Health Balanced Scorecard 2014



Supply Chain Context

The first thing to note about supply chain management is that it is profoundly relevant to the advancement of the broader national and health-specific policy framework in Botswana. In fact, supply chain management impacts, either directly or indirectly, each of the objectives in the MoH BSC. That is because without effective supply chains, the availability of quality medicines and other health supplies in the quantities needed cannot be guaranteed to clients. Without, effective and efficient supply chains, there can be no assurances that the government and its development partners can realize acceptable value in return for their investment of resources. Without effective supply chains, the government's ability to reduce communicable and non-communicable diseases is diminished. Ultimately, without effective and efficient supply chains, the MoH cannot achieve its mission to provide quality preventative, curative and rehabilitative care to clients in government health facilities.

To understand more fully how supply chain management fits into the broader Botswana health strategic framework requires contextual discussion of what is meant by “supply chain management”. Fundamentally, supply chain management is not a single organization or function, but rather, “a network of connected and interdependent organizations mutually and co-operatively working together to control, manage and improve the flow of materials and information from suppliers to end-users”.⁸



⁸ Aitken, J., Supply Chain Integration within the Context of a Supplier Association, Cranfield University, 1998

⁹ The Botswana Health Commodity Supply Chain Framework was approved by stakeholders at the March 2014 Health Supply Chain Strategy Workshop. It is adapted from the Analysis and Planning Tool, a similar framework developed by the USAID-SCMS Project

Within the individual nodes of the supply chain, specific technical functions are carried out. In order for health commodities to be available where and when they are needed, each of these functions must be carried out according to standard processes and coordinated so that the activities of any individual node support and reinforce activities occurring elsewhere. This alignment of activities is critical to the effective and efficient management of the system and thus collaboration among the many stakeholders responsible for supply chain activities is also critical.

Supply Chain Operational Functions

- **Policy, Product Selection and Use:** Systems, processes and infrastructure that support the review of policy and regulations as well as prescribing decisions that determine the products that the supply chain needs to provide.
- **Forecasting and Supply Planning:** Systems, processes and infrastructure that enable consideration of historical data, market trends, changing policy, budget limitations, product safety data, and other information required to develop a feasible plan for future procurements.
- **Procurement:** Systems, processes and infrastructure that contribute to the purchase of required products. Processes include ordering, tendering, negotiating, and establishing enforceable contract terms and conditions with vendors.
- **Warehousing and Storage:** Systems, processes and infrastructure that support the physical keeping of stock, including product receipt, inventory management, picking, packing, and dispatch from the central warehouse.
- **Distribution and Security:** Systems, processes and infrastructure that support the secure transport of stock from the point of dispatch to the point of receipt by SDPs.

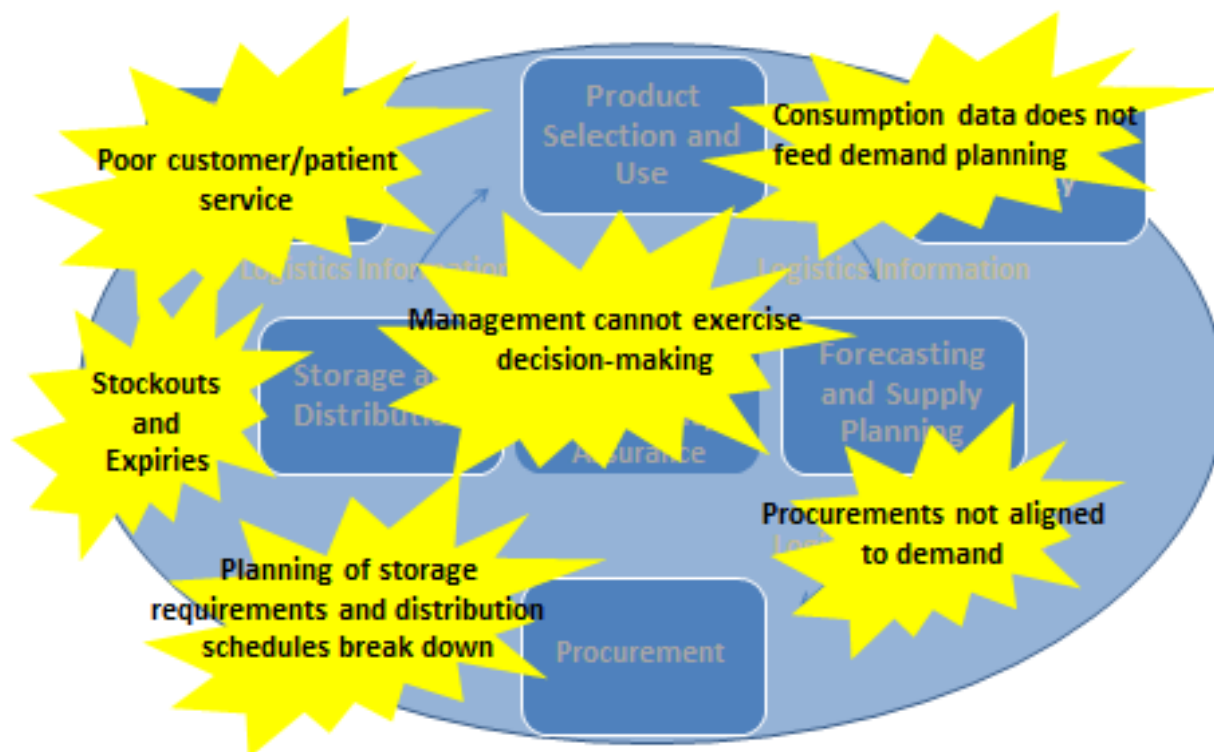
Operational excellence in each of these functional areas is not enough, however to ensure an effective supply chain system. The effective system requires additional systems, processes and infrastructure to allow for the free flow of information for decision-making and the ensuing alignment that is so critical to supply chain effectiveness. This can only be accomplished through coordination. Moreover, the coordination of these functional activities involves interactions among many stakeholders. In the absence of coordination, decisions in the realm of production cannot inform decisions concerning distribution modes, frequency of delivery and storage specifications. In the absence of coordination, selection and use of pharmaceuticals cannot inform the forecasting and supply planning for the products that are needed by clients. In the absence of accurate forecasts and consensus supply plans, procurements are not likely to match the needs of clients and thus stock-outs or excess expiries are likely to occur. In fact, there are hundreds of critical linkages in a supply chain that require coordination and thus effective supply chains must rely on supporting elements that together allow for such coordination.

Supply Chain Supporting Systems

- **Quality assurance:** Systems, processes and infrastructure that enable assurance that the medicines and other health products dispensed to clients are safe, efficacious, and acceptable to the patient
- **Logistics Information:** Systems, processes and infrastructure that enable the flow of information concerning stock levels, forecasted demand, shipping schedules, supply disruptions, and policy or demand changes to allow functional managers to decide what to order, when to order, how much to order, what to ship, when to ship and how much to ship based upon accurate information.
- **Human Resources:** Systems, processes and infrastructure that enable the deployment of appropriate staff in terms of qualification, experience and staffing level necessary to operate the supply chain.
- **Management:** Systems, processes, finance and infrastructure that support the establishment, monitoring and evaluation of performance measures and the informing of continuous improvement interventions.

The interactions among stakeholders in a functioning supply chain system are vast and thus any supply chain strategy must account for the supporting elements necessary to enable collaboration. When operating effectively, efficiently, and in concert, each of these elements support each of the supply chain functions described previously to form a single supply chain organism. When not operating effectively, efficiently and in concert, supply chain functionality breaks down in ways that are all too tangible to clients and other stakeholders:

Representative Symptoms of Supply Chain Ineffectiveness



Health Supply Chain in Botswana

In Botswana, public health supply chain functions are carried out primarily by governmental or quasi governmental institutions. While the process of outsourcing of warehousing and distribution services to a third-party service provider continues, it remains true that supply chain strategy, policy, planning and implementation are managed by the government.

Central Medical Stores (CMS) is the government-owned and government-operated entity responsible for the procurement, warehousing and distribution of public health supplies. All public health supplies, whether they arrive into the country from overseas suppliers at customs or are purchased from local distributors, are delivered to CMS. CMS maintains a catalogue of more than 1,500 stockable products and more than 1,100 non-stockable (special order and specialty) products. The CMS product catalogue includes the entire range of medicines, medical and surgical consumables, laboratory supplies, reagents and minor medical equipment available for use in Botswana. CMS operates from a single distribution center in Gaborone and distributes to all health facilities in the country either directly or indirectly. CMS is mandated by the MoH to monitor and report on product availability, expiries, order fill rate and customer satisfaction and institute quality assurance measures to achieve set targets for each measure. Under the current outsourcing plan, the CMS role will continue to evolve to place greater emphasis on policy interpretation, planning, oversight and contract management as its operational responsibilities in areas such as receipt and storage of commodities, inventory management, customer order management, order picking, packing, dispatch and delivery diminish.

While CMS has come to be a visible, physical representation of the Botswana public health supply chain, it is one of many critical stakeholders in a larger supply chain organism:

Botswana Supply Chain Stakeholders

Stakeholder	Supply Chain Role
MoH	Provides strategy and policy leadership as well as advocacy to support the provision of quality preventative, curative and rehabilitative care to clients in government health facilities
DCS	Department within the MoH responsible for providing quality preventative, curative and rehabilitative care to clients in government health facilities
CMS	Unit within the MoH that manages the procurement, receipt, storage, and distribution of medicines and related health commodities
DMHTs	Responsible for the management of public health facilities in each region including the allocation of resources to support the provision of quality preventative, curative and rehabilitative care
DRU¹⁰	Unit within the MoH that reviews and approves applications for new drugs to be manufactured, imported, exported, distributed or sold in Botswana
LMU	The unit within the CMS that is responsible for collecting and analyzing supply chain data to inform national forecasts and supply plans and to engage other stakeholders in coordinated supply chain management
MRA	Semi-autonomous body, not yet operational, that is expected to assume functional responsibilities currently held by DRU and NDQCL
NDQCL	Unit within the MoH responsible for monitoring the quality of medicines and related health commodities
NHL	Unit within the MoH responsible for testing, surveillance and reporting of disease and safety data
PPADB	A parastatal organization operating under the MFDP responsible for adjudicating and awarding government tenders. PPADB ensures that all procurements for medicines and other conform to national procurement regulations
SDPs	Institutions of the health supply chain closest to the clients, SDPs are responsible for dispensing quality health commodities to clients
Development Partners	While not directly responsible for supply chain functions, development partners such as USAID, GFATM, CDC, CHAI and others have influence through funding requirements and technical support for supply chain planning and capacity-building

Understanding the relationship between effective and efficient supply chain management and access to quality health services, the Ministry of Health has worked tirelessly to improve supply chain planning, operations and coordination. In addition to delegating broad authorities to CMS to procure and deliver drugs and other essential health commodities, the Ministry of Health has also collaborated with local and international partners, including the USAID/SCMS Project, to strengthen supply chain management. For example:

¹⁰ DRU's role is governed by the provisions and requirements of the Drugs and Related Substances Act of 1992

- Established an LMU within the CMS to receive, aggregate, and analyze logistics data from health facilities and disseminate information to stakeholders for decision making.
- Developed and implemented a process for the review and registration of drug application dossiers and established a secure DRU records information management system to facilitate efficient review.
- Deployed the Integrated Patient Management System (IPMS) to manage all inventory in hospitals and supported the development of a patient information management software system (PIMS II) which incorporates a pharmacy module in order to facilitate efficient commodity logistics management at the ART clinics.
- Trained CMS and DHMT staff in forecasting and supply planning and implemented a process for the development of 5-year, rolling, commodity forecasts for ARVs and 2 and 3 year framework contracts for most other commodities.
- Recruited a professional supply chain management team at CMS to transform processes to improve operational efficiency, availability of commodities and reduction in expiries.
- Developed a laboratory commodity specifications database and trained NDQCL staff in pharmaceutical and microbiological analytical drug testing techniques, with support from the FDA, to improve skills for efficient drug quality testing.
- Trained biomedical engineers in ISO 17025¹¹ and basic calibration principles to improve equipment maintenance and reduce the downtime of equipment used for the testing of product quality.
- Implemented reforms to procurement, warehousing, and distribution systems, processes and technologies at CMS resulting in improved supply chain performance and realization of ISO 9001:2008 certification with Botswana Bureau of Standards (BOBS) .¹²
- Implemented performance monitoring and evaluation tools and processes at CMS, including performance indicators, to allow for visibility, supervision and continuous improvement in supply chain operations.
- Designed and implemented logistics systems for laboratory reagents, medicines and related supplies.

The result of this work, particularly at the central level, has been impressive. For example, between July of 2010 and July of 2013, availability of vital medicines at the central level in Botswana increased

¹¹ Internationally recognized standard that define the requirements for the competence of testing and calibration laboratories

¹² In 2012, CMS was certified by an independent body that it meets or exceeds international standards for operations and quality management established by the International Standards Organization.

by 25%, order fill rates at the central level doubled, and the value of expired stock reduced from almost 8% to just 1% of the national medicines procurement budget.¹³

In relation to many other sub-Saharan African nations, the improvements in supply chain management and associated health commodities availability in Botswana over the recent past have been significant, however, challenges remain, particularly at the secondary or district and tertiary or SDP levels. Data collection and reporting, coordination, process adherence, and performance management represent significant deficiencies in the system often manifesting themselves in poor patient experiences. Stock-outs and reports of poor health commodity quality and efficacy at SDPs continue to thwart Ministry of Health efforts to achieve its stated mandate to promote and provide comprehensive preventative, curative and rehabilitative quality health services to the nation and to meet MDGs for health.

National Health Supply Chain Strategy Workshop

Mindful of the challenges of supply chain management that continue to hinder its efforts to improve health service delivery, MoH determined in early 2014 to embark upon a strategic planning process. In March of 2014, MoH convened a three day workshop for the purposes of developing a 5-year Botswana Supply Chain Strategy. The workshop was joined by representatives of relevant stakeholder groups and the output represents the consensus reached:

2014 Supply Chain Strategy Workshop Participating Entities

Sector	Participating Entity
MoH	<ul style="list-style-type: none"> - Office of the Deputy Permanent Secretary - Department of Clinical Services - Drug Regulatory Unit - Department of Public Health - Central Medical Stores - Department of Health Policy Development, Monitoring and Evaluation - Ministerial Strategy Office - National HIV Reference Laboratory - National Health Laboratory - National TB Reference Laboratory - National Drug Quality Control Laboratory - Botswana Essential Drugs Action Program - Institute of Health Sciences
DHMTs	<ul style="list-style-type: none"> - Chobe - Greater Francistown - Greater Gaborone - Gantsi - Goodhope - Kanye - Kweneng East - Kweneng West
SDPs	<ul style="list-style-type: none"> - Princess Marina Hospital

¹³ SCMS Supply Lines Newsletter, July 2013

	- Nyangabwe Referral Hospital
Development Partners	<ul style="list-style-type: none"> - Joint United Nations Programme on HIV/AIDS - African Comprehensive HIV/AIDS Partnership - United States Agency for International Development - United States Centers for Disease Control & Prevention - World Health Organization - The Supply Chain Management System
State President	- Botswana Defence Force-

With the assistance of a technical team provided by the USAID/SCMS Project, Botsang John, the Deputy Director of Clinical Services, chaired and directed the facilitation of the workshop. The workshop embarked upon a strategic planning process aimed at defining overarching workshop objectives, objectives for each of the operational and supporting elements of the supply chain framework, challenges germane to each of these operational and supporting elements, and strategies or interventions to address these challenges. In addition, participants worked to further articulate these strategies or interventions in terms of the individual(s) or entity/entities that would be designated with responsibility for leading the implementation of them, indicators to be used to evaluate their completion, and target dates for completion to occur.

2014 Supply Chain Strategy Workshop Objectives

1. Increase understanding of linkage between supply chain performance and patient welfare
2. Clarify roles and responsibilities of stakeholders at all levels of the supply chain system
3. Align performance management measures that support these responsibilities
4. Develop a supply chain strategy including:
 - a. Goals
 - b. Objectives
 - c. Activities (Strategies and/or interventions)
 - d. Performance Management Plan (e.g. measures, monitoring plan, improvement process)
 - e. Time line
 - f. Risk mitigation
5. Secure commitments to a time-bound action plan

As a first step, and as a way to develop a shared understanding of the current state of the Botswana Health Supply Chain, participants undertook a strategic analysis via a reporting and consensus building session that examined high-level system strengths, weaknesses, opportunities and threats. This SWOT Analysis was undertaken as a means to place the strategic planning discussions to follow in the context of the current reality. This SWOT analysis also drew upon pre-workshop interviews with stakeholders conducted by SCMS technical personnel.

Botswana Supply Chain Strategy SWOT Analysis

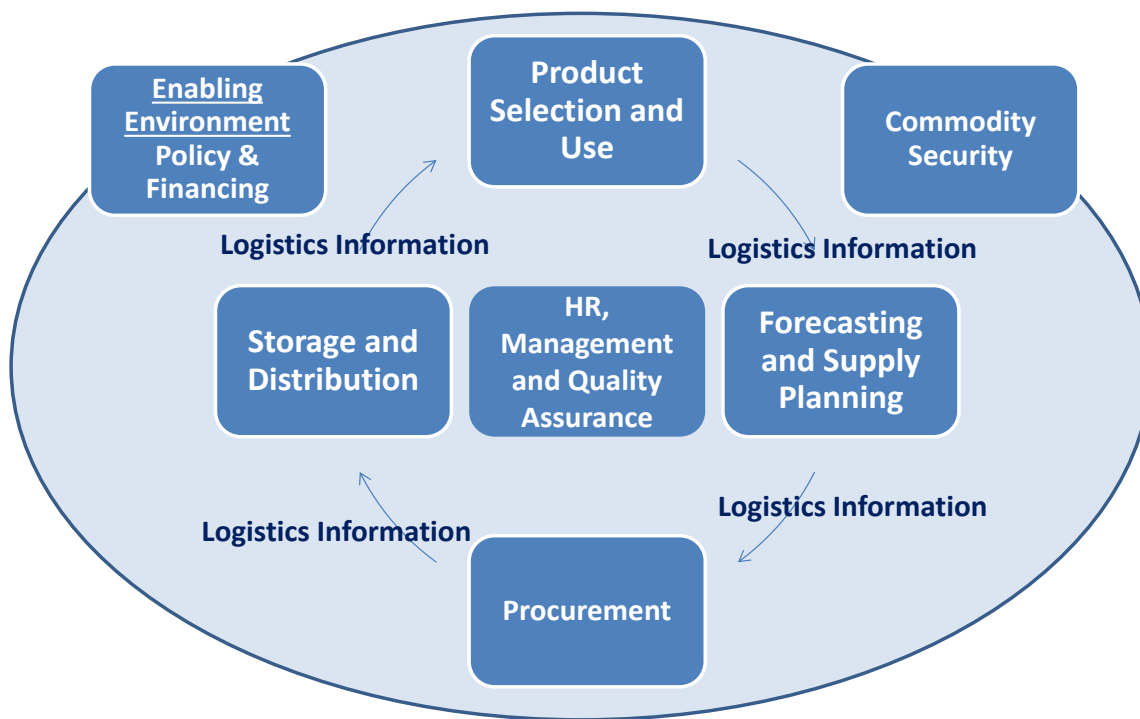
Supply Chain Strengths	Supply Chain Opportunities
<ul style="list-style-type: none"> - Precedence for outsourced services - Affiliated health training institutions - Significant funding resources - Skilled human resource supply - MoH commitment to excellence - GoB performance management system - Existing warehouse infrastructure 	<ul style="list-style-type: none"> - GoB/MoH commitment - Transportation infrastructure - Relationships with external partners - In-service training programs - Political stability - New vaccines on the horizon - Future investment in Africa
Supply Chain Weaknesses	Supply Chain Threats
<ul style="list-style-type: none"> - Communication systems & processes - IT systems and connectivity - Contract management/risk mitigation - Reporting, record keeping - Procurement regulation rigidity - Trained staff supply chain functions - Hospital/facility infrastructure 	<ul style="list-style-type: none"> - Lack of focus/priority on quality - Population growth - Emergent diseases - Counterfeit product - Limited manufacturing capacity - Human resource attrition - Development partner dependency

Botswana Supply Chain Strategy

Overview

This section embodies the output of the MoH supply chain strategy exercise and is an official documentation of the discussions, decisions, and responsibility delegations arrived by a consensus of workshop participants. In this section, the Botswana Supply Chain Strategy is articulated using the supply chain planning framework as an organizing principle. As such, each of the functional component areas, as well as the supporting systems defined in the supply system framework are addressed in terms of objectives, challenges and the associated strategies or interventions identified and agreed upon during the strategic planning process. The Health Supply Chain Framework is reproduced here for reference.

Health Commodity Supply Chain Framework



The strategies or interventions are then further developed to identify responsibility owners¹⁴, performance indicators and timelines. After this information is provided for each of the component areas and supporting systems, this section then provides a risk register. The risk register details risks to the strategy, the potential level of impact associated with each, the probability of their occurrence, as well as mitigation strategies intended to minimize the likelihood and impact of these risks.

¹⁴ Responsibility owners are expressed through the employment of The RACI Model. A detailed description of the RACI Model is provided as Annex 1.

Policy, Selection and Use: Systems, processes and infrastructure that support the review of policy and regulations as well as prescribing decisions that determine the products that the supply chain needs to provide.

Botswana Supply Chain Strategy – Selection and Use

Selection & Use			
Objective:	To establish a system for developing, reviewing and enforcing appropriate policies and guidelines governing product selection and use		
Challenges:	<ul style="list-style-type: none"> • Data unreliable • Treatment guidelines and essential drug list outdated • Inadequate consultation with users • Drug Therapeutic Committees not functioning at facilities • No national committee on selection of lab products and hospital equipment • Unregistered products • Uncoordinated selection of special and emergency orders • Proliferation of laboratory commodities, inadequate lab harmonization and standardization 		
Strategy or Intervention	Responsible Party	Indicator	Date
1. Update treatment guidelines and essential drug list	R-NASCOD Chairperson	a. Guidelines and drug list printed biennially	12/2015
2. Strengthen epidemiology center	R-DD Clinical Services	a. Governance document ratified	12/2014
3. Engage Department of Policy Development, Monitoring & Evaluation on flow of morbidity information	R-NASCOD Chairperson	a. Working group established	6/2014
4. Promote research to inform selection	R-DD Clinical Services	a. Charter document adopted aimed at improving research/intelligence gathering function	10/2014
5. Establish and train drug therapeutic committees	R-DRU	a. Number of committees trained	6/2015
6. Define linkages between BEDAP, CMS and DRU	R-DRU	a. Information flow and linkages mapped and adopted	12/2014
7. Conduct harmonization exercise	R-DRU	a. Exercise complete	3/2015
8. Standardize laboratory equipment platforms	R-NHL	a. Ratification of laboratory equipment standards	5/2015

Forecasting and Supply Planning: Systems, processes and infrastructure that enable consideration of historical data, market trends, changing policy, budget limitations, product safety data, and other information required to develop a feasible plan for future procurements.

Botswana Supply Chain Strategy – Forecasting and Supply Planning

Forecasting and Supply Planning			
Objective:	To build and sustain technical capacity to prepare forecasts and supply plans across all program areas		
Challenges:	<ul style="list-style-type: none"> Inadequate skills, commitment, capacity, incentives, and resources to ensure complete, accurate, and timely reporting to CMS No process in place for collection and analysis of morbidity data 		
Strategy or Intervention	Responsible Party	Indicator	Date
1. Continue & sustain pre and in-service training on LMIS and data quality management	R-SCMS C-IHS/UB A-DD Clinical Services	a. Revised curricula adopted b. Graduates trained c. Lecturers trained	8/2015
2. Issue national policy requiring universal adherence to an integrated LMIS reporting process	R-DD Clinical Services A-MoH I-DHMT Head	a. Policy directive issued b. Reports harmonized c. Percentage of SDPs reporting	6/2015
3. Include logistics reporting in job descriptions, and performance evaluation for MoH/DMHT pharmacists, lab managers and clinical staff (e.g. nurses).	R-DHMT Heads A-DPS C-CMS	a. Revised Job descriptions and PDPs b. Percentage of staff adherent	6/2015
4. Form forecasting technical working groups in the areas of malaria, tuberculosis, essential medicines and laboratory supplies modelled after the current HIV/AIDS Technical Working Group	R-DD Clinical Services C-CMS, SCMS	a. Formation and training of working groups b. No. of functional working groups c. Number of forecasts conducted	9/2015
5. Establish and implement process for collecting and analysing morbidity data from facilities	R-CMS C-SCMS I-DD Clinical Services	a. Process defined b. Process monitored for adherence	12/2014
6. Explore options for outsourcing data capturing and reporting	R-CMS A-DD Clinical Services C-SCMS I-DD Clinical Services	a. Complete market research b. Develop and adopt recommended option (if any).	12/2015

Procurement: Systems, processes and infrastructure that contribute to the purchase of required products. Processes include ordering, tendering, negotiating, and establishing enforceable contract terms and conditions with vendors.

Botswana Supply Chain Strategy – Procurement

Procurement			
Objective:	To ensure a flexible and responsive function for procuring high quality/lowest cost medicines, medical supplies, and lab equipment for availability when and where they are needed		
Challenges:	<ul style="list-style-type: none"> • Rigid PPADB procurement regulations • Lack of contract managers at CMS • Inadequate response to emergency and special orders • Insufficient technical capacity for preparing specifications documents for all products required • Weak product quality verification • Proliferation of laboratory commodities in the system • Insufficient funding made available for necessary procurements • Limited local manufacturing /vendor capacity 		
Strategy or Intervention	Responsible Party	Indicator	Date
1. Develop a separate national policy for the procurement of medicines and related supplies	R-PPADB A-MOH	Policy Approved	6/2015
2. Create contract management positions and hire/train contract management staff	R-CMS A-DD Clinical Services	Managers hired	3/2015
3. Develop procedures for emergency procurements and special orders	R-CMS	Timely availability of commodities during emergency	10/2014
4. Establish a list of preferred technical advisors who can be accessed on a contract-as-needed basis for the purposes of developing specifications documents	R-CMS	Vendor/list management process implemented	11/2014
5. Develop integrated quality assurance and control systems	Addressed in quality section		
6. Optimize laboratory procurements <ul style="list-style-type: none"> a. Examine total cost of equipment lease vs. buy b. Standardize and adhere to list of products c. Establish research function to monitor changes in the market d. Conduct regular reviews of the products list to accommodate market dynamics 	R-NDQCL	c. Cost vs. lease analysis complete d. Product list published and procurement aligned e. Research function established f. Number of revisions implemented	9/2015
7. Review health finance policies to identify appropriate opportunities to save costs or generate new revenues (e.g. mandating that individuals receiving medical aid pay for services)	R-HPDME	Policy reviewed	12/2014
8. Empower locals to start manufacturing/vendor companies	R-PS MOH	Completion of vendor strategy including incentives to encourage private investment	1/2015

Warehousing and Storage: Systems, processes and infrastructure that support the physical keeping and stock, including product receipt, inventory management, picking, packing, and dispatch from the central warehouse.

Botswana Supply Chain Strategy – Warehousing and Storage

Warehousing and Storage			
Objective:	To ensure sufficient capacity to receive, store, manage, pick, and pack materials necessary to achieve required levels of product availability		
Challenges:	<ul style="list-style-type: none"> • Insufficient storage space • Unreliable IT systems • Insufficient cold chain capacity • Proliferation of expired products • Security at district and facility levels • Insufficient stock management capacity at district and facility levels • Labor intensity associated with inventory control systems and processes at district and facility levels 		
Strategy or Intervention	Responsible Party	Indicator	Date
1. Outsource CMS warehousing services	R-CMS	a. #/% of commodities damaged or lost b. % of orders delivered on time c. Pilferage rate at all levels	7/2014 7/2014 7/2014
2. Conduct and implement national warehousing/storage optimization	R-CMS A- SCMS	a. Study complete b. Design implemented	12/2014 12/2016
3. Review and revise policies on expiries	R-CMS A-DD Clinical Services C-SCMS	a. Expiries policy adopted	9/2014
4. Adopt and monitor adherence to inventory management SOPs at district and facility levels	R-DHMTs	a. SOP adherence rate	12/2014
5. Hire and train personnel in materials management at district and facility levels	R-DHMTs	a. % of districts with trained supply chain manager on staff b. % of facilities with trained supply chain manager on staff	12/2014 12/2014
6. Review national policy for hiring and training MoH staff in supply chain.	R-DD Clinical Services	a. Policy reviewed b. Policy adopted	10/2014 1/2015

Distribution and Security: Systems, processes and infrastructure that support the secure transport of stock from the point of dispatch to the point of receipt by SDPs.

Botswana Supply Chain Strategy – Distribution and Security

Distribution & Security			
Objective:	To enable efficient and secure movement of commodities throughout the supply chain		
Challenges:	<ul style="list-style-type: none"> • Insufficient distribution capacity • Insufficient temperature-controlled storage space • Inadequate customer service/communication between CMS, districts and facilities • Misplacement of requisitions • Limited visibility to stock availability by facilities • Shipment of short-dated products • Inefficiencies due to poor integration of IT systems at CMS • Undersupply of logistics forms at facilities • Inadequate physical security throughout the system 		
Strategy or Intervention	Responsible Party	Indicator	Date
1. Outsource distribution services	R-CMS	a. Contract executed b. On-time delivery according to schedule	6/2014 6/2014
2. Ensure that adequate cold-chain capacity is included as part of distribution contract requirements	R-CMS	a. Contract executed	6/2014
3. Improve customer service a. Establish call center at CMS b. Appoint focal person for commodity logistics management and communication at CMS, districts, and facilities	R-CMS	a. Call center operational b. % of facilities, DHMTs, with focal points and CMS reps c. Call response time	6/2014 6/2014 6/2014
4. Modify LMIS report for dual use as requisition form	Addressed in LMIS Section		
5. Improve visibility to stock levels a. Establish electronic interface between CMS stock data and facility logistics focal person b. Send monthly stock status report to those facilities with limited electronic access	R-CMS	a. Electronic interface established b. Percentage of facilities without electronic access receiving monthly status reports	12/2014 10/2014
6. Minimize shipment of short-dated products: a. Follow-up messaging/training for CMS and DHMTs staff on dispatch SOPs pertaining to shelf-life requirements. b. Revise work instructions to provide for extra checks of product dates at receiving and at dispatch	R-CMS	a. Number of facilities with full supply of LMIS forms	9/2014
7. Establish integrated CMS IT system	R-CMS	a. CMS IT system fully integrated	6/2015
8. Increase availability of forms a. Reduce multiplicity of forms b. Print and distribute forms to all facilities as needed	R-CMS	a. Number of follow-up training sessions conducted b. Work instruction revision complete	9/2014 9/2014
9. Improve physical security at all facilities: a. Distribute physical security measures to all facilities b. Monitor adherence to physical security measures c. Mitigate physical security risks	R-CMS	a. Standards distributed b. No. breaches detected c. No. breaches mitigated	12/2014 6/2015 6/2015
10. Reduce order duplication via establishment of: a. back order management system at CMS b. on-line ordering c. a logistics focal point/person at facilities	R-CMS	a. Back order management system operational b. On-Line ordering operational	3/2015 12/2015

		c. Order fill rate	6/2014
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Quality: Systems, processes and infrastructure that enable assurance that the medicines and other health products dispensed to clients are safe, efficacious, and acceptable to the patient

Botswana Supply Chain Strategy – Quality Assurance

Quality			
Objective:	To establish and maintain a functional MOH capacity for approving new health products and monitoring the quality of existing health products		
Challenges:	<ul style="list-style-type: none"> Limited resources to support testing of product and/or processes Inadequate testing infrastructure Insufficient and insufficiently maintained and monitored climate-controlled storage space Weak post marketing surveillance (e.g. reporting, sampling, inspecting) Insufficient leadership advocacy for quality No capacity/system for testing reagents Inadequate coordination of national quality assurance systems 		
Strategy or Intervention	Responsible Party	Indicator	Date
1. Assert product quality in the MOH corporate strategy a. Issue policy statement regarding MoH priority for quality b. Include reference to product quality in MoH corporate strategy	R-PS A-DRU	a. Policy statement issued b. Corporate strategy revision complete	9/2014 1/2016
2. Establish medicines regulatory authority(MRA)	R-DRU A-NDQCL	a. MRA established	6/2015
3. Increase laboratory equipment inspections, maintenance and training	R-PS A-NDQCL C-CMS I-DRU	a. No. of inspections b. Days operational rate for lab equipment c. No. of trainings conducted	4/2015 4/2015 4/2015
4. Acquire temporary space for NDQCL	R-NDQCL	a. Temporary facility made available	6/2015
5. Improve cold chain monitoring a. Publish and distribute cold chain standards to all facilities b. Monitor adherence to standards c. Procure monitoring equipment	R-CMS A-PS C-NDQCL I-DRU	a. Standards circulated to all facilities b. No. of cold chain inspections c. Inspection pass rate d. No. of monitors installed	12/2014 12/2014 12/2014 12/2014
6. Strengthen post marketing surveillance	R-NDQCL A-PS C-CMS I-DRU	a. Procedures published and distributed b. No. products recalled c. No. samples collected d. No. Inspections conducted e. No. results reports disseminated	12/2014 1/2015 2/2015 1/2015 1/2015
7. Develop a coordinated quality assurance system a. Convene working group b. Develop concept of operations for coordinated quality assurance system including roles and responsibilities	R-DRU A-NRL	a. Working group convened b. Concept of operations adopted	9/2014 12/2015

Logistics Management Information: Systems, processes and infrastructure that enable the flow of information concerning stock levels, forecasted demand, shipping schedules, supply disruptions, policy or demand changes allowing functional managers to decide what to order, when to order, how much to order, what to ship, when to ship how much to ship based upon accurate information.

Botswana Supply Chain Strategy – Logistics Management Information

Logistics Management Information			
Objective:	To establish and maintain a functional system for collection and analysis of supply chain data for decision making		
Challenges:	<ul style="list-style-type: none"> • Low reporting rates • Incomplete reports • Unclear roles in LMIS • Staff <ul style="list-style-type: none"> ○ Administrative burden ○ Motivation/commitment ○ Training ○ Feedback • Unreliable communication technology • Reporting tools outdated • Multiplicity of tools • Coordination of reporting intervals • Lack of patient data retained at dispensary 		
Strategy or Intervention	Responsible Party	Indicator	Date
1. Ensure adequate LMIS training and monitoring	R-DD Clinical Services	a. 80% Report Rate	6/2015
2. Incentives: Attach commodity delivery to reporting; recognize reporting performance	R-DD Clinical Services	a. 80% Report Rate	6/2015
3. Reduce Administrative Burden a) Short Term: Quick-review of Max-Min Policy; review reporting requirements; streamline reporting and process b) Long Term: Customize IT systems to accommodate report and process; negotiate distribution contract to include data collection; establish client view portal; establish account/data managers; consider alternative “push” models	R-CMS A-DD Clinical Services C-SCMS I-DHMTs	a. Review complete b. Consolidated reporting form and process adopted c. Systems customized d. Data collection contract completed e. Portal established f. Data managers identified g. Alternative models examined	6/2014 6/2014 6/2015 9/2015 12/2015 9/2015 3/2015
4. Advocate for increased IT bandwidth	R-DHMTs	a. Investment to increased bandwidth	12/2015
5. Create and staff a central reporting office (LMU)	R-CMS	a. LMU fully staffed b. National supply chain dashboard developed	12/2014 12/2015
6. Introduce prescription slips at facilities	R- DD Clinical Services	a. Percentage of SDPs employing prescription slips	12/2014

Human Resource and Management: Systems, processes and infrastructure that support the establishment, monitoring and evaluation of performance measures and the informing of continuous improvement intervention.

Botswana Supply Chain Strategy – Human Resources and Management

Human Resource and Management			
Objective:	To clarify and align roles, responsibilities and performance measures of stakeholders at all levels of the supply chain system		
Challenges:	<ul style="list-style-type: none"> • Short supply of capable, adequately trained people • Insufficient training • Role Clarity including lack of dedicated SC staff • Inefficient and/or in appropriate deployment of staff • Skills loss through staff departure/disincentives for employee retention • Performance Management Systems ineffective or not utilized • Inadequate supervision • Lack of equity in training 		
Strategy or Intervention	Responsible Party	Indicator	Date
1. Conduct system-wide work load assessment including recommended reallocations and recommended additions of specialized staff	R- DD Clinical Services A-PS MOH C-DHMTs	a. Work load assessment complete b. % of recommendations implemented	12/2014 3/2015
2. Establish/enhance in-service and pre-service training programs	R-IHS A-DD Clinical Services C-DHMTs I-SDPs	a. Training programs reviewed b. Design/redesign complete c. Number of trainings conducted d. % or trainees deemed competent	10/2014 3/2015 3/2015 3/2015
3. Develop human resource sustainability policy and plan	R-Corporate Services, MOH A-DD Clinical Services C-DHMTs I-SDPs	a. Policy and plan adopted b. Retention rate	12/2014 12/2014
4. Review job descriptions, ensure supply chain management is included in appropriate job descriptions and personnel development plans at all levels	R-Corporate Services, MOH A-DHMTs C-SCMS, DHMTs	a. No. of job descriptions revised for supply chain management duties b. Revision to personnel assessment for supply chain performance	2/2015 2/2015
5. Enforce personal development plans and reward supply chain performance	R-DHMTs A-DD Clinical Services C-Facilities I-All	a. Percentage of PDPs reviewed and signed b. Cash/non-cash incentive reward program established c. No. of rewards issued	2/2015 2/2015 2/2015
6. Institute supply chain management orientation at all facilities	R-DHMTs A-DD Clinical Services C-Facilities	a. Orientation program developed b. Percentage of facilities receiving orientation	2/2015 2/2015
7. Establish supply chain skills/training database	R-DHMTs A-DD Clinical Services	a. Database established	2/2015
8. Design and implement management skills training for senior managers	R-DHMTs A-DD Clinical	a. Management skills training designed	6/2015

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	Services C-SDPs	b. No of managers trained c. Percentage of trainees deemed competent	6/2015 6/2015
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Risk Mitigation¹⁵

Risk management is the continuing process to identify, analyze, evaluate, and mitigate risk. “Risk is part of every human endeavor. From the moment we get up in the morning, drive or take public transportation to get to school or to work until we get back”.¹⁶ Risks to the Botswana Supply Chain System and the implementation of this strategy present themselves in many forms and are an unavoidable aspect of the endeavor to manage and operate an effective and efficient supply chain. The range of risks possible can be categorized as one of four types:

- F- Financial risks such as reductions in national budget allocation or in development partner funding.
- O -Operational risks such as insufficient human resource capacity to manage supply chain functions .
- FM- Force Majeure risks that are not foreseeable or beyond the control of the system such as political change, global economic dynamics or weather.
- S - Strategic risks such as management changes or the loss of stakeholder confidence.

The purpose of developing and maintaining a risk register is not to eliminate risk but to understand risks and to devise strategies to minimize the likelihood and impact of potential threats to the system. The Botswana Supply Chain Risk register provides a comprehensive list of risks categorized by type and classified by the degree of likelihood and degree of impact should such threats come to fruition. The Register also includes mitigation strategies – interventions and activities that should be undertaken in order to mitigate supply chain risks.

Botswana Supply Chain Risk Register

Key: **T: Type** **F: Financial** **L: Low**
 I: Impact **O: Operational** **M: Medium**
 P: Probability **FM: Force Majeure** **H: High**
 S: Strategic

Risk	T	I	P	Mitigation
1. Public Procurement and Asset Disposal Board (PPADB) does not accept a separate policy governing medicines and health commodities	F	M	L	a. Develop and deliver case to key stakeholders b. Engage senior GoB leaders, including but not limited to PPADB, to make case
2. Abuse of emergency procurement system, lack of adherence to procurement policies and guidelines	S	M	M	a. Strengthen contract management skills, capacity at CMS b. Institution of process quality/audit function to ensure compliance
3. Resistance to increased commitment to supply chain management	O	H	L	a. Develop and deliver case to key stakeholders b. Engage senior GoB leaders to make case
4. Lack of prioritization, delays in policy strengthening	S	M	M	a. Develop and deliver case to key stakeholders b. Engage senior GoB leaders to make case
5. Complexity of outsource service tendering documentation	O	M	M	a. Requirement session with partners to be conducted in development of requirements for

¹⁵ This section is informed by a description furnished by the Marquette University Risk Management Unit, 2014

¹⁶ NYU Stern School of Business, 2014

Risk	T	I	P	Mitigation
				future tenders b. Bidders conferences and other access as appropriate to achieve mutual information sharing c. Ensure SLAs and reporting metrics are clear
6. Insufficient supply of financially and technically viable service providers to take on services	O	M	M	a. Requirement session with partners to be conducted in development of requirements for future tenders b. Bidders conferences and other access as appropriate to achieve mutual information sharing c. Financial strength assessment undertaken as part of due diligence in tender evaluation
7. Public sector hiring freeze limits capacity for supply chain practice and performance	S	H	L	a. Develop and deliver case to key stakeholders for increased human resource commitment to supply chain management b. Engage senior GoB leaders to make case c. Explore opportunities for outsourcing supply chain functions
8. CMS key leadership secession	S	H	M	a. Document roles and responsibilities for key CMS staff b. Identify resources to provide redundancy c. Mentor next generation of CMS leadership
9. Staff turnover, loss of human resource capacity at all levels	O	H	H	a. Staff retention sustainability plan to identify interventions b. Increased incentives (financial and non-financial) to encourage retention c. Clarification of supply chain roles and responsibilities
10. Resistance to operational process change at all levels	O	H	L	a. Develop and deliver case to key stakeholders b. Ensure adequate training for operational staff c. Link PDPs and cash and/or non-cash incentives to process adherence
11. Unfavorable market dynamics drive commodity pricing in terms of shortage of local vendors and manufacturers	FM	M	H	a. Vendor strategy to identify specific interventions to encourage vendor and manufacturer participation b. Requirement sessions with partners to be conducted in development of requirements for outsourcing c. Bidders conferences and other access as appropriate to encourage private sector investment
12. Contract underperformance	O	H	L	a. Ensure SLAs and reporting metrics are as clear as possible b. Review and define all potentially complicated areas during evaluation and negotiation
13. Ineffective mechanisms for contract disputes in contract	O	L	H	a. Ensure suitable dispute resolution provisions included in contracts
14. Poor management of resources	F	H	M	a. Strengthening contracts management skills, capacity at CMS b. Institution of process quality/ audit function to ensure compliance at all CMS and all facilities

Implementation: The Way Forward

Of all the ingredients necessary for effective and efficient supply chains, the most critical is coordination. Coordination between drug suppliers and buyers; clients and care-givers; supply chain service providers and their customers; manufacturers and regulators; and among leaders of local, district, national and international institutions. Coordination begets alignment and alignment underlies effective and efficient operation of each of the functional areas described in the Botswana Supply Chain Strategy.

The document concludes with a set of next steps that are designed to sustain momentum and increase the likelihood of a successful implementation of this National Health Supply Chain Strategy.

Botswana Health Supply Chain – Next Steps for Implementation

1. Strategy formally accepted by MOH
2. Incorporate responsibility for operationalizing the strategy into the CSF(#8)
3. Complete transfer of CMS warehousing and distribution functions to the selected third party service provider (Botswana Couriers).
4. Staff and train personnel to manage the LMU.
5. Complete review of Max-Min Policy, review reporting requirements, and streamline reporting process as prescribed in Strategy 3a of the Management Information System Strategy Section of the Strategy.
6. Document all performance indicators established and include as part of an overall performance management plan that includes reporting requirements and frequency.
7. Establish a management committee to periodically review and revise the strategy and to monitor and evaluate progress against performance indicators.
8. Develop a detailed, long-term implementation plan including but not limited to:
 - a. Detailed work plans for each strategy and intervention described
 - b. Detailed master work plan that consolidates each of the work plans in item (a) above
 - c. Costing associated with each strategy or intervention

- d. Optimization analysis of current resource allocations as means to better deploy current resources and to gain understanding of the resources required in excess of current or expected funding levels
 - e. Service Level Agreements to formalize terms and conditions of all relationships between service providers and service recipients.
 - f. Increase understanding of linkage between supply chain performance and patient welfare
9. Based upon the costing and resource analysis described above, develop a financing plan for the resources required in excess of current or expected funding levels.
10. Further develop risk register to include roles and responsibilities associated with each mitigation strategy

Annex 1. The RACI Model

The RACI model is a standard approach endorsed by the Project Management Institute ® for assigning roles and responsibilities for any activity or group of activities. For each of the strategies or interventions identified in the Botswana Health Supply Chain Strategy, assignment of responsibility is followed by one of four notations:

- (R) Responsible: The stakeholder who performs the work. There is no more and no less than one R assigned to each intervention or strategy.
- (A) Accountable: The stakeholder accountable for the work or for decisions made. There can be zero or one A assigned for each strategy or intervention but no more than one.
- (C) Consulted: The stakeholder(s) who must be consulted prior to any decisions being made in connection with the work and/or at the completion of the work. There can be as many Cs assigned as is appropriate to the strategy or intervention.
- (I) Informed: The stakeholder(s) who must be informed when a decision is made or when work is completed. There can be as many Is assigned as is appropriate to the strategy or intervention.

Annex 2. Supply Chain Strategy Workshop Participants

#	Name of Participants	Designation	Organization	
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